

Metaphysical Deduction***Modality***

1. Modality concerns the copula, not the content of a judgment: S **may be** P; S **is** P; and S **must be** P. They are termed, respectively, the *problematic* function of thought, the *assertoric*, and the *apodeictic*. The quantity, quality, and relation of S and P are identical in all three, i.e. no difference in content is made. The difference concerns the judgment itself

“Problematic judgments are accompanied with the consciousness of the mere possibility of judging, assertoric judgments with the consciousness of the actuality of judging, apodeictic judgments, lastly, with the consciousness of the necessity of judging.” (Jäesche §30)

2. Problematical modality coincides with the function of the understanding, assertoric with the function of the judgment-faculty, and apodeictic with the function of reason. *The understanding makes assumptions; the judgment faculty makes assertions (establishes the sphere and/or the conditions under which a judgment becomes a proposition); and reason ties everything together in a single whole (the assertion thought in logical relation to its conditions/sphere).*

3. A judgment is problematic if the question of its affirmation or denial is an open one, i.e. both options are logically **possible**. This does not prove that it is possible in reality, only that it can be admitted into the understanding, i.e. is thinkable. It becomes assertoric with its **actual** affirmation or negation, so that the assertion of the affirmation excludes the assertion of the negation and vice versa; finally it becomes apodeictic when its affirmation or denial is **necessary**.

4. We treat as problematic the modality of both antecedent and consequent in a hypothetical judgment, and so too all the disjuncts in a disjunctive judgment. What is assertoric is the logical sequence in the conditional and the logical coordination in the disjunction. When the assertion is viewed as determined by the logic, then it is apodeictic.

5. N.B.: no truth-value analysis here; modality too must be represented in terms solely as concept-containment. If S is P, then Q is R and S is P; then Q is R. E.g. “Socrates must be mortal” in case that “If Socrates may be human, then Socrates may be mortal” and “Socrates is human”.

The Clue to the Discovery of all Pure Concepts of the Understanding: Sect. 3, the Categories

Analysis ∅ Synthesis ∅ Pure synthesis ∅ pure concept of the understanding.

All synthesis is spontaneity, no synthesis is received ∅ the necessary unity of synthesis must *a fortiori* derive entirely from the spontaneity of the subject ∅ it cannot come from the senses or imagination ∅ it must come from the understanding alone ∅ the understanding by itself is a mere power to judge, constituted of logical functions ∅ the necessary synthetic unity of the manifold must derive from the determination of pure

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synthesis of imagination in conformity with logical functions \emptyset the pure concept of the understanding is the representation of this necessary unity of pure synthesis.

Textual Commentary

A. The material of pure concepts of the understanding

1. “The logical function...is required for making a concept out of any data” (A239/B298). For through it alone can representations assume the role of predicates or subjects in judgments.

2. General logic ignores the specific content of the representations and attends only to their form as concepts, i.e. their status as universals.

3. Transcendental logic does not abstract from all content of representations.

4. The manifold of a priori sensibility in general supplies the understanding with the material it needs for making pure concepts (categories).

5. Pure space and time are the conditions under which alone representations of objects may be received; concepts of these objects must therefore be affected by space and time.

B. Synthesis

6. In order for the manifold of “pure a priori intuition” to be *cognized* the **spontaneity** of our thought requires that it be **gone through, taken up, and combined**: this action of the mind Kant terms **synthesis**. [*That it is an act of spontaneity is to say that the subject’s adds synthesis to the manifold, that synthesis never is simply received but always requires an act of the subject. That cognition requires synthesis is not news; what is news is that this synthesis must come from the very same subject that contributes the forms of appearances. If the subject contributes the form of appearances (the modes of their manifoldness), then the same subject must also contribute the synthesis of appearances according to the forms.*]

7. Synthesis is the act of putting different representations together and grasping (*begreifen*) their manifoldness in one cognition.

8. The synthesis is **pure** if the manifold is not empirical but a priori as is that of space and time. [*Seems like intuitive containment is meant, not conceptual: i.e. the manifold within/of one representation.*]

9. *Analysis* by itself can generate only the form of a concept [*universality*], never the matter. In order for there to be a content fit for being analyzed, the representations must first be given [*together in one cognition*]. “Synthesis of a manifold (be it given empirically or a priori) is what first gives rise to [*the compresence of the manifold in one*] cognition... the synthesis is what gathers the element for cognition and unites them in (*zu*) a certain content.” (A77/B103)

10. Since the first origin of our cognition is the act of synthesis, this act must now occupy our attention.

C. Imagination

11. Synthesis is the effect of the faculty of imagination. **Imagination** is “a blind but indispensable function of the soul, without which we should have no cognition whatsoever, but of which we are scarcely ever conscious.”

12. Bringing this synthesis to concepts is function of the **understanding**.

13. Through the bringing of the synthesis of imagination to concepts, **cognition** properly so called arises.

D. Necessary unity of synthesis

14. “Pure synthesis, represented universally, gives us the pure concept of the understanding.”

15. This is possible if pure synthesis “rests upon a basis of a priori synthetic unity.” E.g. our counting proceeds by tens (the decade), so that in terms of this concept the unity of the synthesis of the manifold is rendered necessary. If the number is large, then the only way we can represent it is through our *consciousness* of the synthesis whereby it is formed; that is, the reason each step in the process continues from the previous one is that we are *conscious* at each step of the rule which necessitates what the next step will be. In this way, **necessity** is introduced into the synthesizing process. [*Kant is looking for more a more basic, absolutely general necessitating unity of the synthesis of the manifold – so that we are conscious at each step of a common ground in terms of which the synthesis is necessitated.*]

16. The special concern of transcendental logic is not the function whereby different representations are brought *under* one concept, but rather this: how the pure *synthesis* of representations can be brought *to* concepts, as the basic requirement of cognition.

17. The answer is threefold: the *manifold* of pure intuition; the *synthesis* of that manifold in imagination; and the concepts which give *unity* to this pure synthesis.

18. These concepts “consist solely in the representation of this necessary synthetic unity ... and they rest on the understanding.” *The understanding is the unity-giver; synthesis in itself lacks unity just as the manifold in itself lacks synthesis, and only through the spontaneity of the subject can this be remedied.*

E. A79/B105

19. Only the logical function which can impart unity to various representations by means of predication in judgment can impart unity to the synthesis of representations in an intuition.

20. “Hence, the same understanding, and indeed through precisely the same actions whereby it brought about the logical form of a judgment in concepts, by means of analytic unity, also brings a transcendental content into its representations by means of the synthetic unity of the manifold in intuition general... In this manner there arise precisely the same number of pure concepts of the understanding which apply a priori to objects of intuition in general as, in the preceding table, there have been found to be logical functions in all possible judgments. For these functions specify the understanding completely, and yield an exhaustive inventory of its powers.” [Cf. “Concepts of the understanding are also thought a priori, but they contain nothing more than the unity of reflection upon appearances, insofar as these appearances necessarily belong to a possible empirical consciousness.” (A310/B366-7)]

21. Insofar as it contains these pure concepts, the understanding may be called **pure understanding** (A80/B106).

22. The table is not rhapsodic because it is developed systematically from a common principle, namely, the power to judge (= power to think).

23. Predicables of the categories: force, action (*Handlung*), passion (*Leidens*) are predicables of causality; presence (*Gegenwart*) and resistance of community; coming to be (*Entstehens*), ceasing to be (*Vergehens*), alteration (*Veränderung*) of modality; number of totality.

24. Kant does not offer definitions of the categories, and later (A241-2) says that genuine objective definition of the categories is impossible since this would require prescinding from sensible conditions, in which case they collapse into logical functions.

25. The third member of each group is the result of combining the first two: totality is plurality considered as unity; limitation is reality combined with negation; community is the reciprocal causality of substances; and necessity is existence as given through possibility itself. The third category in which group is not derivative because each involves a special act of the understanding which is not identical with the other two. E.g. number, a derivative of totality, is not always possible even though unity and plurality are, namely, in the representation of the infinite (B111).

Understanding as source of necessary unity of synthesis

1. Kant's purpose in the metaphysical deduction of the categories is to establish that understanding is the source of the necessitating unity which must be conferred upon any synthesis of the manifold of representations if an object is to be cognized through them.

2. This claim is premised on two consequences of the principal thesis the Transcendental Aesthetic, according to which the *manifoldness* of sensations, as they appear to us a posteriori in sense perception, is not intrinsic to or given through these sensations, but instead derives from a pure intuition which precedes and makes possible all empirical consciousness of these sensations *as* a manifold.

3. The first is that all analysis (even quantitative comparisons) presupposes synthesis of the manifold, and, second, that all synthesis, without exception, is an act of the subject (the spontaneity of imagination), never something given through the senses (receptivity).

4. For if the *manifoldness* of appearance is something we ourselves must contribute to it (as its form) through pure intuition, then the *synthesis* of this manifold can never be given through sensation (the matter of appearance), and so must always be added to the manifold by the subject.

5. From this it follows that the necessitating *unity* distinctive of objective cognition cannot be derived through analysis of either the manifold sensory given itself or its synthesis in imagination, but must likewise be added to it by the subject.

6. Given that sense simply supplies the manifold and the imagination merely synthesizes it, Kant was warranted in attributing the function of conferring unity upon the synthesis of the manifold to a third faculty, distinct from these. For the necessitating unity in question can consist in nothing more than the representation of the synthesis of a manifold according to a common ground of determination (for example, a unit such as the decade).

7. From this, Kant infers that the unity-conferring faculty must be the same one responsible for the *analytical* procedure of ordering various representations under a common one, thereby transforming them into a concept (see A76/B102; also A239/B298).

8. For the only difference between the two cases is that, in the former, it is not *representations* but their *synthesis* in imagination that is attributed a common ground of determination in the understanding (see A78-9/B104); but the common ground itself is the same, and can only be represented universally, by means of a concept.

9. On this basis, Kant asserts that the faculty responsible for conferring the unity of a common ground of determination on the synthesis of the manifold is the *understanding*,

and indeed the same understanding which, in the context of general logic (that is, in isolation from its relation to other faculties like sensibility and desire), is defined as the mere *power to judge* – a faculty whose sole and entire innate endowment consists of *logical functions of judgment* (“the unity of the act of ordering diverse representations under a common one,” A68/B93). (The restriction of logic to mere logical functions of judgment follows from the thesis that all analysis presupposes synthesis, whereupon all objectivity, even the mathematical sort, is excluded from it.)

10. Once Kant has shown that the common ground, whereby alone the synthesis of the manifold can be determined in such a way as to make cognition of an object possible through that manifold, derives from the logical functions of judgment, the rest of the metaphysical deduction falls out without difficulty.

11. He then had only to restrict the focus to the *pure* manifold of space and time bequeathed by transcendental aesthetic and the *pure* synthesis of that manifold in imagination, in order to relate “The concepts which give this *unity* to pure synthesis and consist simply in the representation of this necessary synthetic unity” directly and exclusively to the understanding. For when the focus is so restricted, it excludes not only empirical concepts but mathematical ones as well, since the latter presuppose, and so cannot enter into, the necessary (synthetic) unity of the manifold of pure space and time in general.

12. Hence, the pure concepts which “consist simply in the representation of this necessary synthetic unity” can consist of nothing besides the bare logical functions of judgment, and differ from them only insofar as they stand in relation to the manifold of sense and its synthesis in imagination.

Kant’s Psychologism

1. Hume’s psychologistic analysis of ‘cause and effect’ pointed the way to a critique of reason, for it enabled Kant to generalize Hume’s question and then condense it into the formula, “how are synthetic a priori judgments possible?”

2. It is not difficult to recognize in Kant’s tripartite answer a psychologistic analysis of essentially the same kind as Hume’s.

3. Its first component is the Transcendental Aesthetic (see B73), which proves that (i) space and time are not categories (concepts of the understanding), but (ii) pure intuitions of sensibility which (iii) precede and make possible all appearances.

4. Its second component, the metaphysical deduction of the categories, has as its primary task to supply an exhaustive list of primary metaphysical concepts.

5. It purports to accomplish this (i) by tracing these concepts back to their origin in the universal representation of the pure synthesis in imagination of the pure manifold of space and time insofar as this synthesis is determined conformably with the logical functions of judgment.

6. Since (ii) logical functions correspond to the complete innate endowment of the understanding (as a mere power to judgment), this shows that (iii) the sole and entire content of the categories is given by the logical functions and that (iv) the scope of their validity is demarcated by pure synthesis and the pure manifold.

7. Moreover, since (v) the unity of this pure synthesis can derive only from the understanding, and since (vi) such unity is necessary for cognition, it follows that (vii)

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only insofar as pure synthesis is represented in conformity with the logical functions is unity of synthesis possible; thus, (viii) the categories, which consist solely in the representation of this necessary synthetic unity, are essential to all cognition (see A78-79/B104).

8. The third and final component of Kant's analysis of synthetic a priori judgment is the objective transcendental deduction of the categories. Its purpose is to fill a lacuna left by the metaphysical deduction: whereas transcendental aesthetic proves that space and time are subjective conditions under which alone appearances may be given, the metaphysical deduction proves nothing whatever about the conformity of appearances to the categories. The objective deduction fills this lacuna by showing that the categories alone are capable of meeting an inherent requirement of our scheme of objective representation: that objects have a reality independent of their appearance to the senses in intuition (see A92-3/B125).

I. Argument from Separability

1. Kant's Humean-style separability principle: precludes the possibility of any *external (transcendentally real) source* of necessary constraint on synthesis in imagination.

Synthesis not received.

2. The absence of any limitation through pure space and time means that such necessity cannot have its source *in intuition*.

3. The only alternative remaining is to suppose that concepts are somehow able to supply necessary constraints on synthesis.

4. But which concepts and how can they supply necessitating unity to synthesis?

5. Both empirical concepts and mathematical concepts are ruled out.

6. The first can convey no idea of necessity where none is exhibited by the objects from which they are derived.

7. The second can derive necessity neither from pure intuition nor from general logic. 8. Insofar as such concepts carry with them an element of necessity – as even the most humdrum causal judgments (the sun *warms* the stone) and mathematical equations ($2+2$ equals 4) certainly do – they therefore must have it from elsewhere, and, in particular (all other options having been foreclosed), from some other kind of concept. 9. What this is is not difficult to see. With all sensible contents, pure and empirical alike, excluded, such a concept can contain nothing in its representation other than pure synthesis itself as constrained by some necessity; and with no source for such a representation remaining but pure understanding, the sole and entire content of the necessity it represents must be supplied by the logical function of judgment (“only the bringing of this synthesis to concepts is a function belonging to the understanding,” A78/B103).

10. In other words, the only possible meaning a metaphysical concept can have, given the sole remaining source from which it can possibly stem is the representation of the pure synthesis of imagination as determined in accordance with one or another logical function of judgment: Pure *synthesis, represented universally*, gives the pure concept of the understanding. But by this synthesis, I understand that which rests on a ground of a priori synthetic unity; hence, our counting (most notably in cases of larger numbers) is a *synthesis according to concepts*, because it occurs in accordance with a common ground of unity (e.g. the decade). Under this concept, the unity of the synthesis of the manifold thus becomes necessary.

Distinct representations are brought under a concept analytically (a proceeding treated of in general logic). But transcendental logic teaches how we bring *to* concepts not representations but the *pure synthesis* of representations. The first thing that must be given to us a priori to the end of cognition of all objects is the *manifold* of pure intuition; the *synthesis* of this manifold in imagination is the second, but does not yet yield any cognition. The concepts which give *unity* to this pure synthesis and consist sheerly in the representation of the necessary synthetic unity are the third thing required for cognition of an occurrent (*vorkommende*) object, and rest on the understanding.

The same function which gives unity to distinct representations in a *judgment* also gives unity to the bare synthesis of distinct representations *in an intuition*; and this unity, expressed universally, we entitle the pure concept of the understanding. The same understanding, through the very same operations whereby it brought about (*brachte zustande*) the logical form of a judgment in concepts by means of analytic unity, also brings a transcendental content into its representations, by means of the synthetic unity of the manifold in intuition in general, for which reason they are called pure concepts of the understanding, which relate to (*gehen auf*) objects a priori (with which general logic has nothing to do). (A78-9/B104-5)

Pure concepts of the understanding are nothing more than concepts of intuitions in general insofar as these are determined in themselves, and so necessarily and universally, in respect of one or another of these moments of judging, and will exactly parallel them. (PFM, §21)

II. Kantian Separability and its consequences

1. Kant's account of how we come into possession of metaphysical concepts cannot be properly understood unless viewed through the prism of his Humeanism. Not even Hume himself went so far as to suppose that representations are so completely "loose and distinct" that no relations, *not even mathematical*, pertain to their contemplation (comparison in consciousness) by intrinsic necessity, independently of the peculiar constitution of our faculties of representation.
2. For Kant, there is no intrinsic order or unity of representations whatsoever. This necessitates a reconception of the active powers of the mind as geared not towards reconstructing and bringing to consciousness a *preexistent* order impressed on representations by some external, underlying ground: Descartes's God, Spinoza's essence-manifesting Substance, Leibniz's Harmonizer, Locke's matter-in-motion, Berkeley's Author of the book of nature, etc. – but instead towards *introducing order and unity there where none existed in the first place* ("we can cognize a priori in things only what we ourselves put into them," B xviii).
3. So just as we find no synthesis in the manifold given by sense in a priori synopsis (not even in perception itself – apprehension of a manifold in an intuitive representation) but must instead introduce it ourselves in accordance with our forms of sensibility, so too we find no ground of unity necessitating synthesis in the synthesis itself but instead must introduce it ourselves in accordance with the logical functions of thought. *Unity must come from the same source as synthesis: our faculties of active combination of the manifold.*
4. Hence, necessitating unity exists not in the manifold itself, much less in innate principles of pure reason, but solely in and through the mental activity of synthesizing data of sense in imagination; and since synthesizing activity is simply consciousness of these data, this is just to say that unity exists only in and through our *consciousness* of representations, never in the representations themselves.

5. Necessitating unity consists, in particular, in the *recognition* of such consciousness (synthesizing activity) as subject to one or another logical function of judgment, so that a metaphysical category *is* nothing more than any such recognition.

6. And, finally, with the restriction of the *sense* of a category to pure consciousness, Kant was able to secure exactly the same psychologistic consequence regarding the *scope of their application* that Hume obtained by tracing ideas of cause and effect relations to idea-enlivening association and custom: validity solely with respect to objects of experience, and to these only insofar as they are *experienced* (i.e. apprehended in a perceptual *consciousness* subject to pure intuition of space and time – see B160-1).

III. Unity of consciousness (synthesis in imagination)

1. To characterize imagination as a species of consciousness is simply to say that, instead of being a source of new data, it is confined to comparing, recombining and ordering the inputs of the senses. In it, we *become aware of*(regard) these data in new ways.

2. In relegating all synthesis to the imagination (apprehension in intuition included), Kant thereby limited all combination and ordering of representations to consciousness; and in treating the logical functions as grounds of synthetic unity, as necessitating combination and ordering in certain ways, he thereby transformed them into grounds of the *unity of consciousness*.

3. Insofar as the notion of pure apperception (original self-consciousness) involves that of a priori synthetic unity, this means that already in the metaphysical deduction, all the elements are in place for Kant to draw the inference he actually will draw, and explore the implications of, only in the (subjective) transcendental deduction: namely, that the categories are simply and solely means for bringing about synthetic unity of apperception.

categories ... constitute the thought of an *object in general* through combination of the manifold in one apperception. (B158)

[The categories] are only rules for an understanding whose sole capacity consists in thought, i.e. the action of bringing the synthesis of the manifold given to it elsewhere in intuition to the unity of apperception. (B145)

Apperception is itself the ground of the possibility of the categories which, on their side, represent nothing other than the synthesis of the manifold of intuition insofar as this manifold has unity in apperception. (A401)

Thus, there will just as many a priori concepts in understanding under which objects of the senses must stand as there are kinds of composition (synthesis) with consciousness, i.e. kinds of synthetic unity of apperception in the manifold given in intuition. (*Progress*, AA 20, 271)

4. The theme of self-consciousness, its unity and its identity, which becomes central in the (subjective) transcendental is not, as sometimes is supposed, an afterthought, an extraneous element introduced with an eye to a ground of proof (*Beweisgrund*) for the objectivity of the categories, but an integral part of their very meaning as universal representations of the pure synthesis of imagination.

5. The prominence of self-consciousness in the transcendental deduction therefore has to do not with the (objective) proof but the (subjective) explanation (*Erklärungsgrund*) of the categories.

6. *How* the synthesis of the manifold of pure intuition in imagination can be determined by something apparently so heterogeneous to it as a logical function of judgment – the sole nature of which is to unite universals in judgments – is not Kant's concern in the

metaphysical deduction of the categories (this task falls to the subjective transcendental deduction).

7. It is quite sufficient there to show *that* the categories of metaphysics are nothing more than a form of judgment “transformed into a concept of the synthesis of intuitions” (A321/B378). For Kant’s purpose in the metaphysical deduction of the categories, just as in the metaphysical expositions of space and time in the *Transcendental Aesthetic* (B38), was to demonstrate the existence of a priori representations by tracing them to their origins in the conscious mind.¹ By showing “their complete coincidence (*Zusammentreffung*) with the universal logical functions of thought,” he could then legitimately claim to have demonstrated “the origin of the categories a priori” (B159).

IV. Pure concepts meet Humean challenge

1. If indeed the advent of the categories brings with it nothing – no insight, no objective content, no extension of pure reason – not already present in the mind by virtue its possession of a bare capacity to judge (understanding as *Vermögen zu urteilen*), then not even the Humean skeptic could mount a principled resistance to their admission as authentic possessions of our understanding. For by tracing them back to the logical functions, Kant has identified the categories with the most humdrum and familiar sort of mental activity: judgment.

2. This is exactly the kind of strategy Hume himself pursued. For he too denuded notions such as cause and effect of everything exotic and mysterious (“metaphysical”) by tracing them back to an origin in commonplace mental activities: association by resemblance and contiguity (to yield relations of constant conjunction)² together with customary transitions of thought. On one occasion, Hume exploited this to make light of anyone who would “put an invidious construction on my words, by saying simply, that I assert the necessity of human actions, and place them on the same footing with the operations of senseless matter.” For his explanation of causal necessity entirely in terms of associative, customary transitions of thought means that, far from ascribing “to the will that unintelligible necessity, which is suppos’d to lie in matter,” Hume actually ascribes “to matter, that intelligible quality, call it necessity or not, which the most rigorous orthodoxy does or must allow to belong to the will. I change, therefore, nothing in the receiv’d systems, with regard to the will, but only with regard to material objects.” (THN 410) In other words, Hume’s system has the advantage of setting the most common, transparent mental phenomena in place of the old metaphysical obscurities by which matter was defined: a “self-subsistent substrate” that “supports” properties, including “powers”, reflective of its “inner essence”, etc.

3. Kant’s approach in the metaphysical deduction has exactly the same advantages, since, in place of innate ideas of substance or cause, he substitutes such everyday logical acts as predication and conditional assumption. But, owing to their logical origins,

¹The formula I use here to describe a metaphysical deduction – demonstrating the existence of a priori representations by tracing them to their origins – is actually, from a Kantian perspective, redundant. But it seems justified given the prevailing tendency to treat ‘a priori’ as an essentially epistemic notion. See concluding remark II, this chapter.

²See concluding remark II of chapter 3.

Kant's metaphysical concepts have the additional feature of being both pure and irreducible to psychology.

4. Of course, this comes at a price many hesitate to pay: the acceptance of transcendental idealism. For a category is nothing more than the universal representation of the synthesis of the manifold of pure space and time insofar as this synthesis is determined in conformity with a logical function. All three are involved in the very meaning of a 'category', according to Kant: the manifold of pure space and time, its synthesis in imagination, and the universal representation of this synthesis by means of the logical function. The logical function "brings a transcendental content into intellectual representations" only by virtue of its a priori relation to the a priori products of sense and imagination, so that, without transcendental idealism, there could be no categories. Thus, whereas in Hume's theory the transmutative alchemy whereby mere transitions of thought become, for the conscious subject, full-fledged objective relations consists entirely of certain affects (feelings of vivacity and facility), in Kant's theory it lies in the determination of pure synthesis of the manifold in conformity with logical functions.

V. Kant's examples

1. The essentially deflationary import of the metaphysical deduction is evident from Kant's examples.
2. The standpoint from which they need to be considered is that of pure understanding, where the concern is to discover what object, if any, it has the power to conceive if left entirely to its own devices; that is, what contribution is pure understanding able to make to objective representation by drawing solely from its own resources?
3. The result is paradoxical: virtually nothing, yet, at the same time, almost everything. The latter aspect is simply a consequence of Kant's separability principle: since neither the manifold nor its synthesis carries with it the least element of necessary constraint, the understanding, and only the understanding, can make good this want and so provide the basis for the quantitative and dynamical necessities fundamental to objective representation (see 8 above).
4. The former aspect comes to the fore when we ask what is it to think something as, say, a substance? Kant's answer is given at B128-9: "if I bring the concept of a body under the category of substance, it is thereby determined that its empirical intuition must always be considered as subject in experience, never as mere predicate." To say something is a substance means nothing more than to consider its *concept* as capable only of occupying the *subject* position, never the *predicate* position, in any judgment.
5. Thus speaks understanding by means of the only voice it has: the logical function of judgments. The category is merely a logical function serving in the capacity of a predicate, the true and immediate subject for which is not the concept as a representation of intuitions, much less the intuitions themselves, but simply and solely the behavior of the concept as a universal in judgments. The category introduces a constraint on its behavior, and therewith introduces the missing element of necessity.

VI. The quantity example

1. The strictly discursive role of the categories, confined to the determination of concepts in judging, is evident also in Kant's elucidation of the categories of quantity during one of

his lectures on metaphysics: When we survey the concepts of the understanding, at bottom they mean nothing else than the relation of the understanding to a representation insofar as the latter is determined in respect of one or the other of the logical functions. When I say ‘Some men are sinners’, this ‘some’ is a plurality, to be sure, but it is determined only logically, in comparison with the representation, and I do not think a synthetic unity. But when I represent to myself a being in such a way that a One (*ein Eines*) contains several, I have the concept of magnitude. For example, ‘Some men are learned’ and ‘Some learned individuals are men’: I can reverse the proposition. But if the proposition is determined in such a way that it cannot be reversed, then it is a magnitude.³

2. Making sense of this example is no simple undertaking, but for our purposes the following considerations should suffice. Concepts may be viewed either analytically/reflectively, as marks common to different representations and containing these *under* them (analytic unity), or synthetically/determinatively, as determining the combination of the manifold *in* one representation so that the manifold are together in that one in a quite special way (synthetic unity).

3. Now, the omission of the categories of quantity from the judgment in Kant’s example, ‘Some men are learned’, in no way prevents us from viewing the judgment as an analytic unity, since the two concepts it contains can still be viewed as a plurality *logically*, insofar as several representations may be supposed to fall within its scope (whether a plurality actually do or not is immaterial).

4. But so regarded, there is also nothing to prevent us from transposing the concepts to form ‘Some learned individuals are men’, since the original judgment is then merely the thought that a part of the scope of one concept (i.e. species-concepts of the first) falls also within a part of the scope of the other concept (i.e. as being at the same time species-concepts of the second), and thus is undifferentiated from its transposition.

5. This changes, however, when the concept ‘learned’ is brought under the quantitative category *unit* (of measure),⁴ and is predicated of the concept man. For it then determines the synthesis of the manifold of men so that the One (*Eines*) into which this manifold is combined takes on the value of a *total* of these units (learned individuals), that is, a real *magnitude* (though only a quantity, not a quantum!).⁵ Thus determined, the original

³Cited and translated by Longuenesse from the *Metaphysik von Schön* (student notes on Kant’s lectures). She explains it as follows: “The last two sentences can be interpreted in the following manner. If I consider only the logical form of the proposition ‘Some men are learned’, this proposition can be converted into another, ‘Some learned individuals are men’. In other words, it ‘can be reversed.’ But if I consider the act of thinking by which the proposition was formed, then I recognize that this act consists of the successive consideration of the *x*s reflected under the concept ‘man’, in order to compare them to the concept ‘learned’, not the reverse. From this viewpoint, just as (following Kant’s explanation in §14 of the *Critique*) the *x* reflected under the concept ‘man’ can be only subject, not predicate, similarly the successive synthesis of such *x*s is what generated the judgment considered in its logical quantity: ‘Some men are learned’. I did not perform the successive synthesis of the units thought under the concept ‘learned’ in order to determine which of them are also subsumed under the concept ‘man’, but on the contrary, I successively considered the units thought under ‘man’ and compared them with respect to the concept ‘learned’. Thus if I reflect the act through which the judgment, considered in its logical quantity, was generated, ‘the proposition cannot be reversed.’” (*Kant*, chapter 9) I do not see why it could not be reversed if construed in the manner proposed; yet that is what the application of the logical function is supposed to explain.

⁴Kant adds the qualification ‘measure’ at PFM §21.

⁵Here ‘total’ should be understood as a sum, not the totality of men. A quantum is a One that contains its units not only as a total but as a whole contains its parts. All real quanta (for beings with

judgment can no longer be reversed without violence to its sense: ‘man’ is henceforth thinkable in relation to ‘learned’ only as an object to be quantified, never as a unit by which to quantify some object.

6. But what does this really mean? Here we need to remain cognizant of the deflationary import of Kant’s derivation of the categories. Unfortunately, since Kant (or his student note-taker) failed to spell it out in terms of logical functions as he did for substance and accident at B128-9, we can only surmise his intent. Taking the latter as our model (where, by bringing the concept ‘body’ under the category of substance “it is thereby determined that its empirical intuition must always be considered as subject in experience, never as mere predicate”), we may suppose that the thought of a manifold of men as a *quantity* of learned individuals – the thought of a determinate many as compresent in a determinate One – can mean nothing more than the determination of ‘man’ as always particular, never universal, in predicative relation to ‘learned’.

7. For the effect of this is to make the concept ‘man’ the functional equivalent of a singular term in relation to the concept ‘learned’. Since, from the standpoint of pure understanding, a singular term is simply a universal without any extension (a concept to which no other concept is subordinable, a degenerate concept), the determination of ‘man’ as always particular, never universal, in respect of ‘learned’ renders ‘Some learned individuals are men’ no less nonsensical – nonsense of precisely the same kind – than the judgment ‘Some learned individuals are Socrates’; it thus becomes impossible to conceive of ‘man’ as a One in which a many of ‘learned individuals’ is quantitatively contained.

8. Beyond this, we have no other pure concept of magnitude; everything else we might suppose to pertain to this concept actually derives not from understanding but from imagination and sense (that is, everything else is either an image or a schema of magnitude – see A142-3/B182). For the categories are free of all sensible content: “since the categories originate merely in the understanding, *independently of sensibility*, I must abstract from the manner how the manifold for an empirical intuition is given so as to look upon (*sehen auf*) only the unity which is added to intuition by means of the category through the understanding.” (B144) Categories are not concepts of pure intuition, not representations with spatial or temporal objects. In and of themselves, they are void of all objective significance. They acquire it (“transcendental content”) only insofar as they are used to impose constraints of necessity on concepts like ‘man’ or ‘body’ and thereby generate judgments of experience. It is therefore only indirectly, by means of the use of concepts of the latter in judgments – concepts which do directly determine the synthesis of the manifold in intuition – that the categories obtain relation to objects: I ... related these functions of judgments to objects in general, or rather to the condition for determining judgments as objectively valid, and thus arose the pure concepts of the understanding... But what is essential in this system of categories ...[is] that, by means of it, the true meaning of the pure concepts of the understanding and the condition of their use could be exactly determined. For here it became evident that they are in and of themselves nothing more than logical functions, and as such do not constitute the least concept of an object in itself, but require the grounding of sensible intuition, and in this serve only to determine empirical judgments in respect of all the functions of judgment, regarding which they are otherwise indifferent and indeterminate, thereby procuring them universal validity and making possible, by their

sensibilities constituted like ours) are of time or space, or of things insofar as they occupy and contain space or time (extensive magnitudes).

means, *judgments of experience* in general... [T]he nature of the categories ... at the same time limits them to use merely in experience. (PFM, §39)

VII. How the category differs from the logical functions

1. We must not, however, go too far in stressing the agreement of category with logical function. There is a real, vitally important difference between them.
2. At the most abstract level, it is evident simply from the fact that the one is an actual conceptual representation, capable of being predicated of other representations in a judgment, whereas the other is merely a form for uniting distinct representations (concepts or judgments), given from an unspecified “elsewhere”, to form new representations (judgments) but is not itself the representation of anything.
3. For instance, the logical function lets us form the thought ‘Some learned individuals are men’ just as readily as it does the thought ‘Some men are learned’; however, when the concept ‘man’ is brought under the category of plurality, it carries with it the implication that ‘man’ always designates an individual, thus depriving the thought ‘Some learned individuals are men’ is deprived of all objective import.
4. In other words, although the use of the category does not stop us from fashioning thoughts like ‘Some divisible things are bodies’ and ‘Some learned individuals are men’, these thoughts cannot have relation to objects. For categories “are nothing but mere forms of judgments insofar as these forms are applied to intuitions (which with us are always sensible only)” (MFPNS, AA 4, 474 n.); insofar as these judgments contradict the conditions imposed by the category, they therewith lose the capacity to be true (or false) of an object of the senses, and can count as, at most, renderings in discursive form of the subjective verdicts of association imagination (judgments of perception), but never as full-fledged cognitions of objects (judgments of experience).
5. What this means is that the relation of understanding to the heterogeneous, alien faculty of sense via imagination is absolutely essential if pure concepts of the understanding are to come into our possession. No categories can exist until there is a pure synthesis of imagination, and there can be no pure synthesis of imagination without a manifold of pure intuition. *All three* elements – the manifold, its synthesis, and the unity of this synthesis – are present in the category, enshrined in its very representation: The concept of the understanding contains the pure synthetic unity of the manifold in general. (A138/B177)
// They are only rules for an understanding whose whole power consists in thought, i.e. the act of bringing the synthesis of the manifold given to it from elsewhere in intuition to the unity of apperception, which therefore cognizes nothing whatever in its own right but only combines and orders the material (*Stoff*) for a cognition, intuition, which has to be given to it through the object. (B145)
6. So too, just as one would expect, the categories of practical reason come into existence only through the relation of pure understanding (here, in its guise as reason) to the faculty of desire (*Begehrungsvermögen*) via free choice (*freie Willkür*).
7. Their main difference from metaphysical categories is that, instead of serving “to bring the manifold of (sensible) *intuition* under one consciousness a priori,” they “subordinate the manifold of *desires* to the consciousness of a practical reason which commands within the moral law a priori, or the consciousness of a pure will” (CPrR, AA 5, A115).
8. Nevertheless, both tables of categories agree in being completely a priori and purely intellectual: just as the categories of freedom are wholly indifferent to the actual feelings and desires which motivate us, as well as to human moral psychology overall, so too pure

concepts of the understanding are completely indifferent to our peculiar modes of sense perception (space and time) and to the particular associative psychology that governs the synthesis of perceptions.

9. So, even unschematized categories still differ from mere logical functions by virtue of their essential relation to imagination and its synthesis (“The transcendental synthesis of imagination underlies all our pure concepts of the understanding... the categories are nothing other than representations of something (appearance) in general insofar as it is represented through transcendental synthesis of imagination”).⁶

10. Deprived of their relation to the manifold of a pure intuition *in general* (“irrespective of whether it be our own or any other, so long as it is sensible,” B150), there would be no synthesis left for the categories to think, and not only would they lose all meaning, they would cease to be possible at all.

11. The very potential to employ logical functions of judgment, not only synthetically (to determine objects) but analytically as well (to determine concepts),⁷ depends on their relation to imagination. In its absence, not even Descartes’s omnipotent deity could extract from logical functions the least particle of thought once the understanding has been determined as a mere power to judge; for the entire import of its restriction to logical functions is to bereave understanding of even so much as a hint of innate objective content.

12. Thus, paradoxical though it may seem, the consequence of the total elimination of everything sensible and empirical from their representation is incontrovertible proof that the categories are not innate but acquired: representations we make for ourselves by determining the productions of a faculty alien to understanding by means of its innate logical functions.

VIII. Relation to Hume

From a Kantian perspective, Hume was therefore both right and wrong. He was right to reject traditional explanations of the source of our concepts of necessary connections – volition and pure reason – and to seek their source instead in the consciousness wherein perceptions are compared and related. He went astray, however, when he treated “this self-endowment (*Selbstgäberung*) of concepts, and, as we may say, this spontaneous generation on the part of our understanding (inclusive of reason), without impregnation by experience, as being impossible” (A765/B793). Having overlooked the need for a *pure* consciousness of the sensible manifold (space and time) and, with it, a pure synthesis of this manifold in imagination, Hume could not see that genuine metaphysical concepts might be acquired through the determination of this synthesizing activity by the pure understanding, conceived as a mere power to judge. Handicapped by this oversight, he looked only to empirical consciousness, and in particular to association and custom, for the origin of our concepts of necessity; and so, instead of genuine metaphysical concepts, he found only ersatz psychological counterparts.

⁶*Werke* XXIII, B12, p. 18f. (loose sheet relating to first edition version of the *Critique of Pure Reason*). Cf. A245: “The pure categories are nothing else than representations of things in general so far as the manifold of their intuition must be thought through one or another logical function.”

⁷Keeping in mind that analysis presupposes synthesis.

